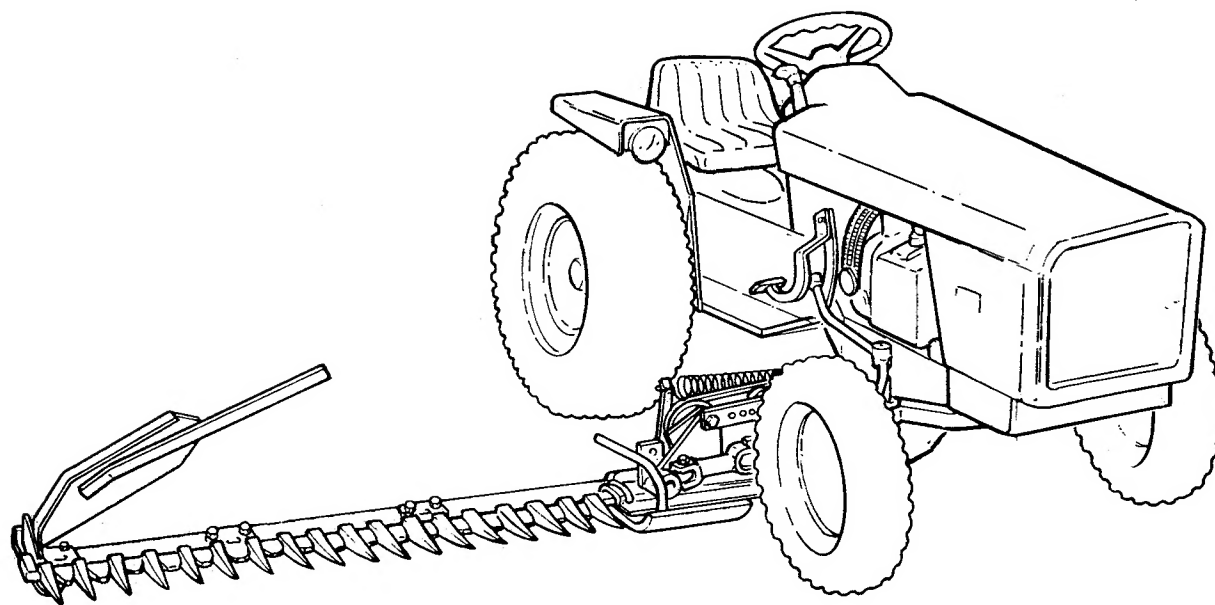


# OPERATOR'S MANUAL

## 57" SICKLE BAR



57" SICKLE BAR  
MFG. NO. 1600197

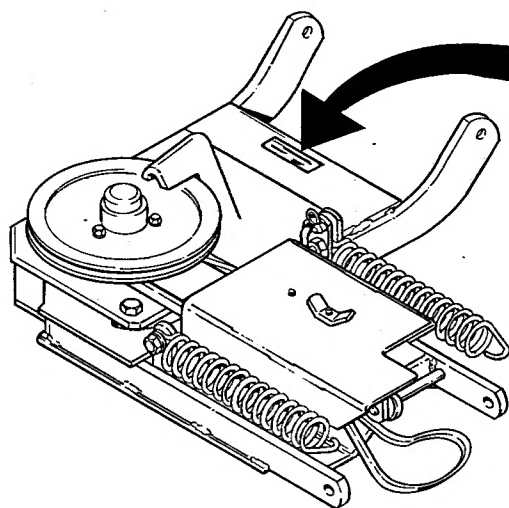


**CAUTION:** Read Manual Thoroughly,  
Before Operating

FORM - 1652003  
PRINTED IN U.S.A.  
7612

# Identification

When ordering replacement parts for your sickle bar mower be prepared to give your dealer the identification number found on the identification plate shown below.



Refer to i.d. no. when  
writing or ordering parts.  
I.D. No.

## Accessories and Attachments

There are several optional accessories and attachments for your sickle bar mower. They will make your mowing jobs easier. See your dealer if you wish to purchase any of the following:

**HITCH ASSEMBLY FOR MID-MOUNTED ATTACHMENTS** — required to mount mower.

**REAR WHEEL WEIGHTS** — give added traction and stability when operating on slopes.

**HOURLY METER** — records engine operating time to tenths of an hour.

**TIRE CHAINS** — provide additional traction.

**FRONT WEIGHT** — gives better steering traction at the front tires.

**FRONT BUMPER** — needed to mount front weight.

**REAR HIGH FLOATION TIRES** — offer better traction and allow sharper turns than turf tires.

**REAR LIGHT KIT** — illuminates work area for rear-mounted attachments.

# Installation

## CONTENT OF SECTION

This section tells you how to install and remove the sickle bar mower. Before installing this sickle bar mower, the tractor must be equipped with a long right-hand lift cable. If this cable is not in-

stalled on your tractor, see Assembly section in this manual before starting installation.

## INSTALLATION

1. Install hitch assembly for center-mounted implements (item A, figure 1) to front of tractor frame with four pins (item B) and spring clips (item C). Leave the first hole (item D) open.
2. Disconnect right and left lift cables from storage points on tractor. (See figure 2.)
3. Use pins and spring clips removed in step 2 to attach lift cables to right (item A) and left (item B) rear lift.
4. Push rear lift lever on tractor forward to fully lower rear lift. Then pull both cables fully forward.
5. Slide mower under center of tractor from right side. Drive pulley on mower should be under center of tractor.

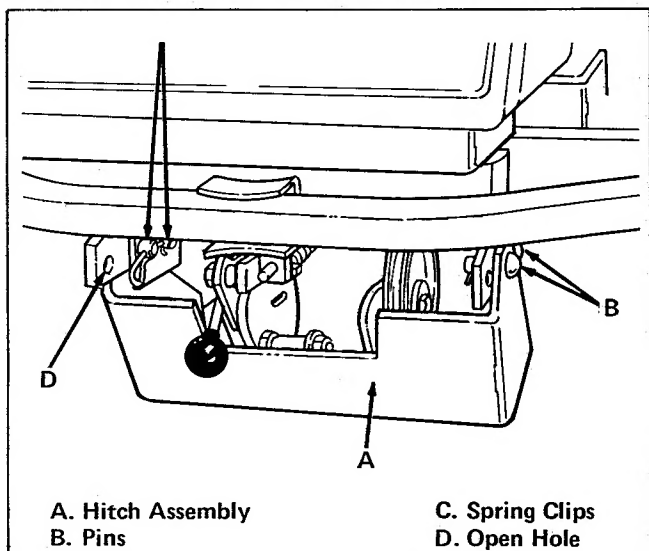


Figure 1. Hitch Assembly

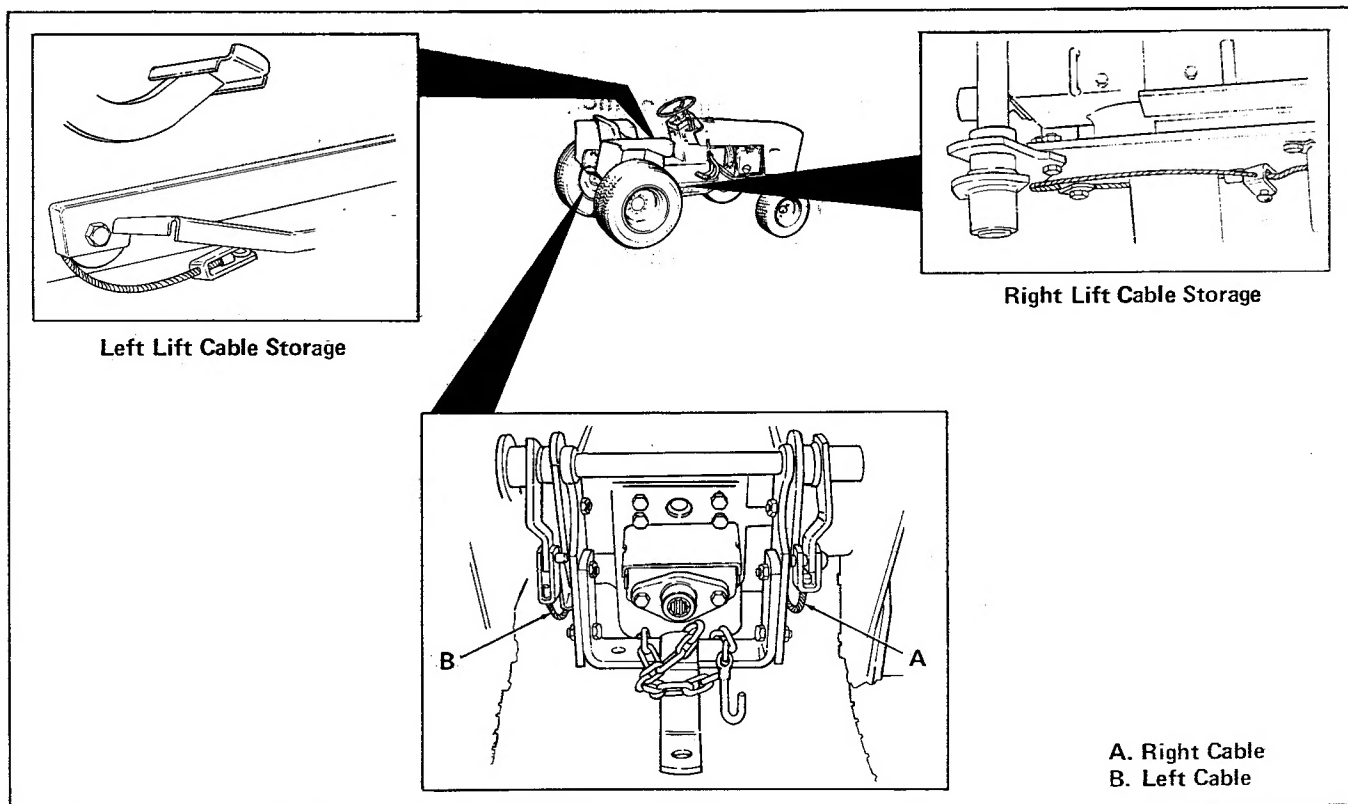
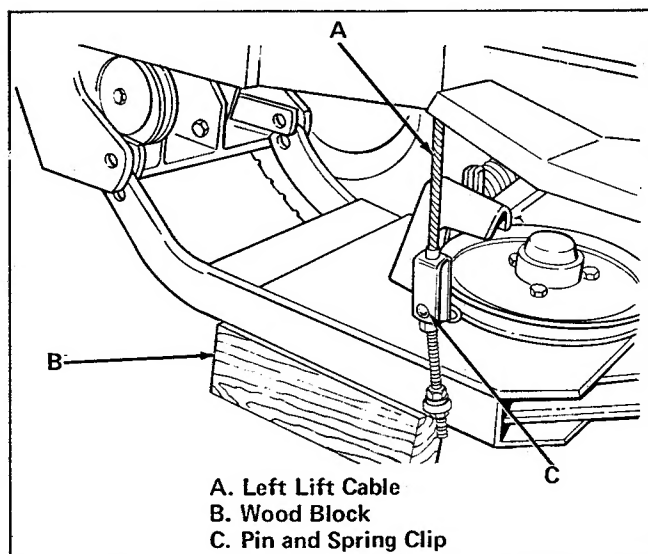
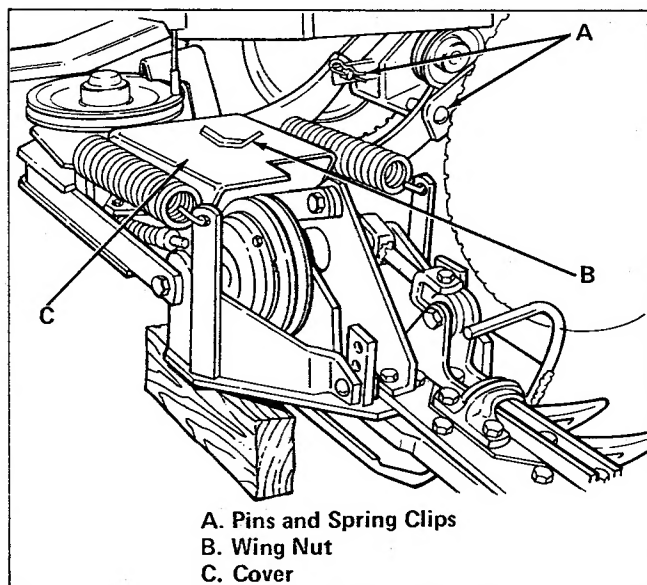


Figure 2. Cables Attached to Lift



**Figure 3. Attaching Left Lift Cable**

6. Block up left side of mower with a short wooden block (item B, figure 3).
7. Attach left lift cable (item A) to mower using pin and spring clip (item C) supplied with mower. Be sure to push spring clip fully in to prevent its loss during use.
8. Start engine. Use front hydraulic lift lever to raise mower off wooden block. Then stop engine, set parking brake, and remove key.
9. Block up right side of mower with wooden block (item B) used in step 6.
10. Raise front of mower and attach it to front hitch. Use two pins and spring clips (item A, figure 4).



**Figure 4. Mower Installation**

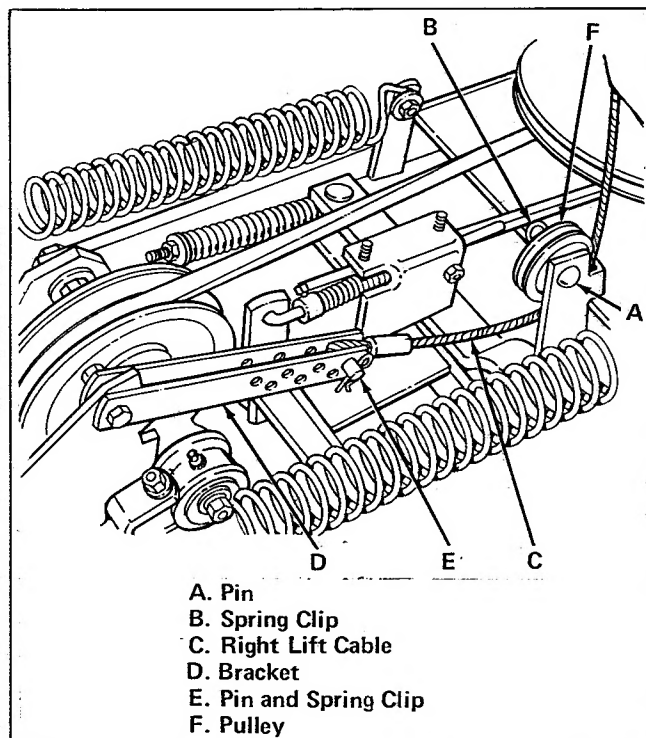
11. Start engine. Raise mower with hydraulic lift to remove wooden block. Lower mower to ground. Shut off engine.
12. Remove wing nut (item B) and cover (item C) from mower.
13. Remove spring clip and pin (items A and B, figure 5) to remove pulley (item F).
14. Place right lift cable (item C) under pulley. Install pulley with pin and spring clip.
15. Pull cable all the way through and fasten to bracket (item D) with pin (item E) and spring clip. Pin (item E) must be placed in the lift arm hole that will provide a snug cable when sickle bar is level.

#### NOTE

Holes in bracket (item D) can be used to adjust vertical cutting range. The bar can be set to cut at an angle above or below ground level tractor is on.

#### NOTE

Pin (item E) must be installed so spring clip faces outward, or the head will catch on the frame.



**Figure 5. Attach Right Lift Cable**

16. Replace cover and wing nut (item B) used in step 12.

17. Raise tractor hood and install the mower drive belt (item A, figure 6) over the engine front PTO pulley (item B) and down around idler pulleys (item C). Be sure drive belt "V" is in the pulley grooves and twisted correctly.

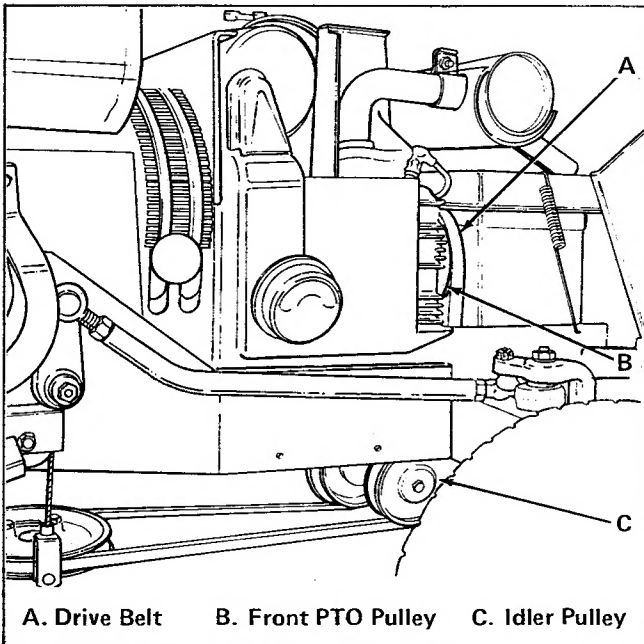


Figure 6. Mower Drive Belt

18. Pull belt tightening handle (item A, figure 7) forward to release position. Place drive belt (item B) around mower pulley (item C). Push belt tightening handle toward tractor and over center to tighten belt.

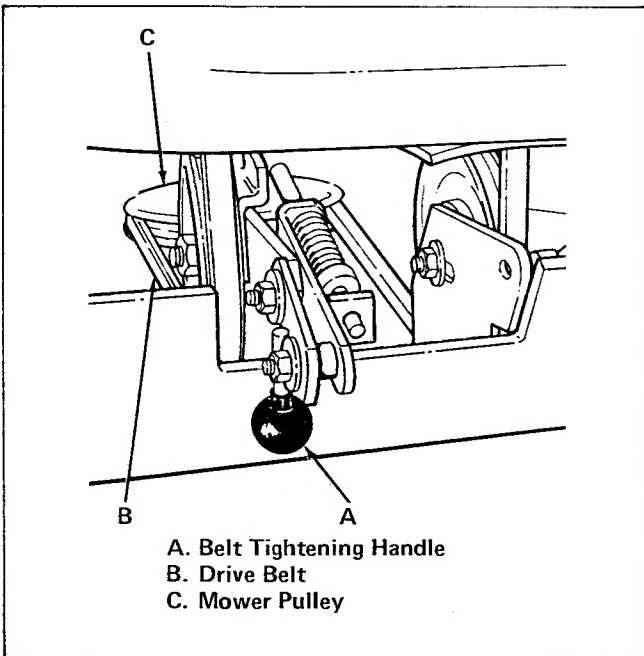


Figure 7. Drive Belt

19. The sickle bar mower is properly installed on tractor and is ready for operation.

## REMOVING THE SICKLE BAR MOWER

### WARNING

Before attempting to adjust, service or remove the mower, be sure the engine is shut off, key removed, parking brake set and the sickle knife motion has stopped.

To remove the sickle bar mower follow these procedures:

1. Position tractor on a level surface with enough room on right side to lower and pull out sickle bar.
2. Push hydraulic control lever to FLOAT position. Unhook transport chain and lower sickle bar to the ground.
3. Under the front of tractor, pull belt tightening handle forward to release belt tension. Remove belt from mower pulley, idler pulleys and PTO pulley.
4. Use tractor hydraulic lever to raise the mower. Place wooden block (item A, figure 8) under the sickle bar. Move hydraulic lever to FLOAT position.
5. Remove wing nut (item B) and cover (item C).

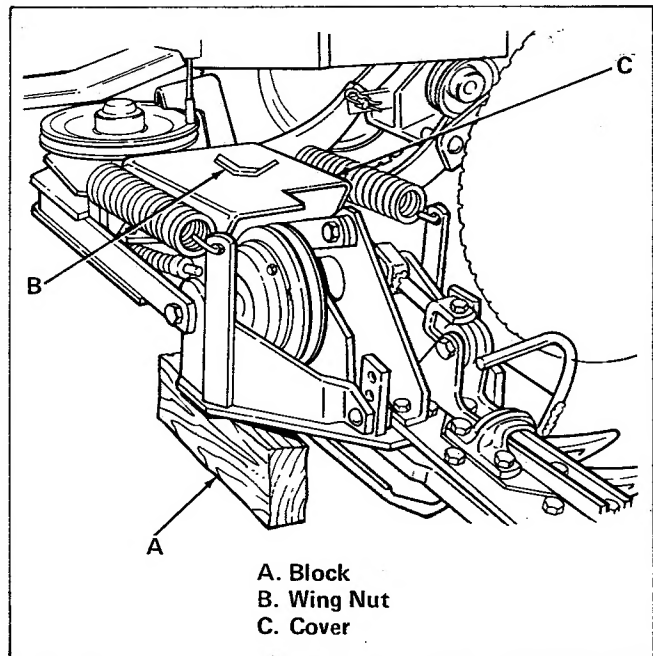


Figure 8. Mower Removal

6. Remove spring clip and pin (item A, figure 9) and spring clip and pin (item B) to disconnect the right lift cable (item C) from mower. Put pins and spring clips back into proper holes. Replace cover and wing nut.

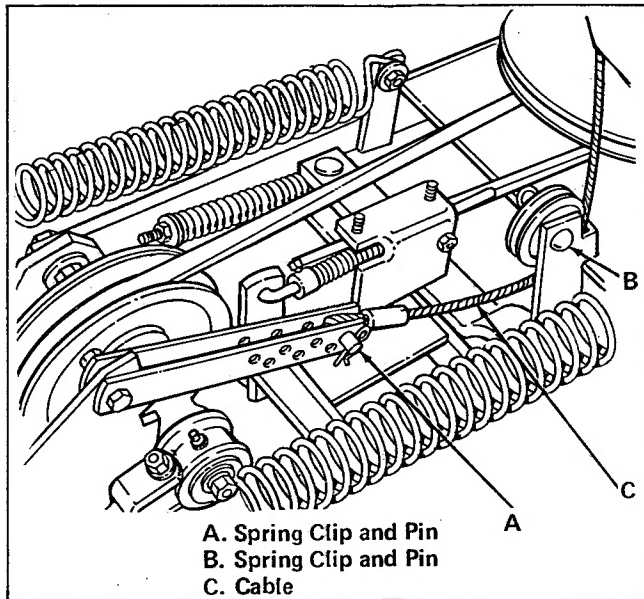


Figure 9. Right Lift Cable Removal

7. Raise tractor lift and remove block from under sickle bar. Lower the mower with hydraulic lift. Remove spring clips on hitch and remove pins (item A, figure 10).

8. Place block (item B) under the mower, move hydraulic control lever to FLOAT position. Remove spring clip and pin (item C) to remove left lift cable. The mower is now disconnected and can be slid out from under the tractor.

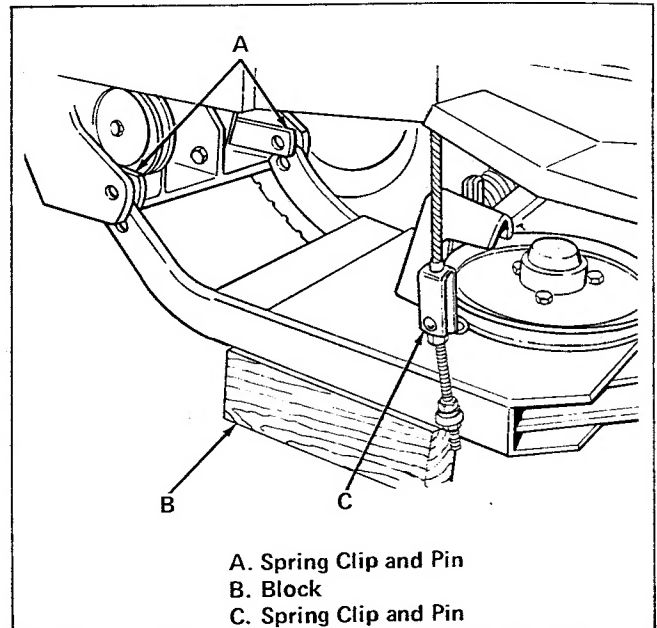


Figure 10. Hitch and Left Lift Cable

9. Remove and store right lift cable (item A, figure 11) and left cable (item B).

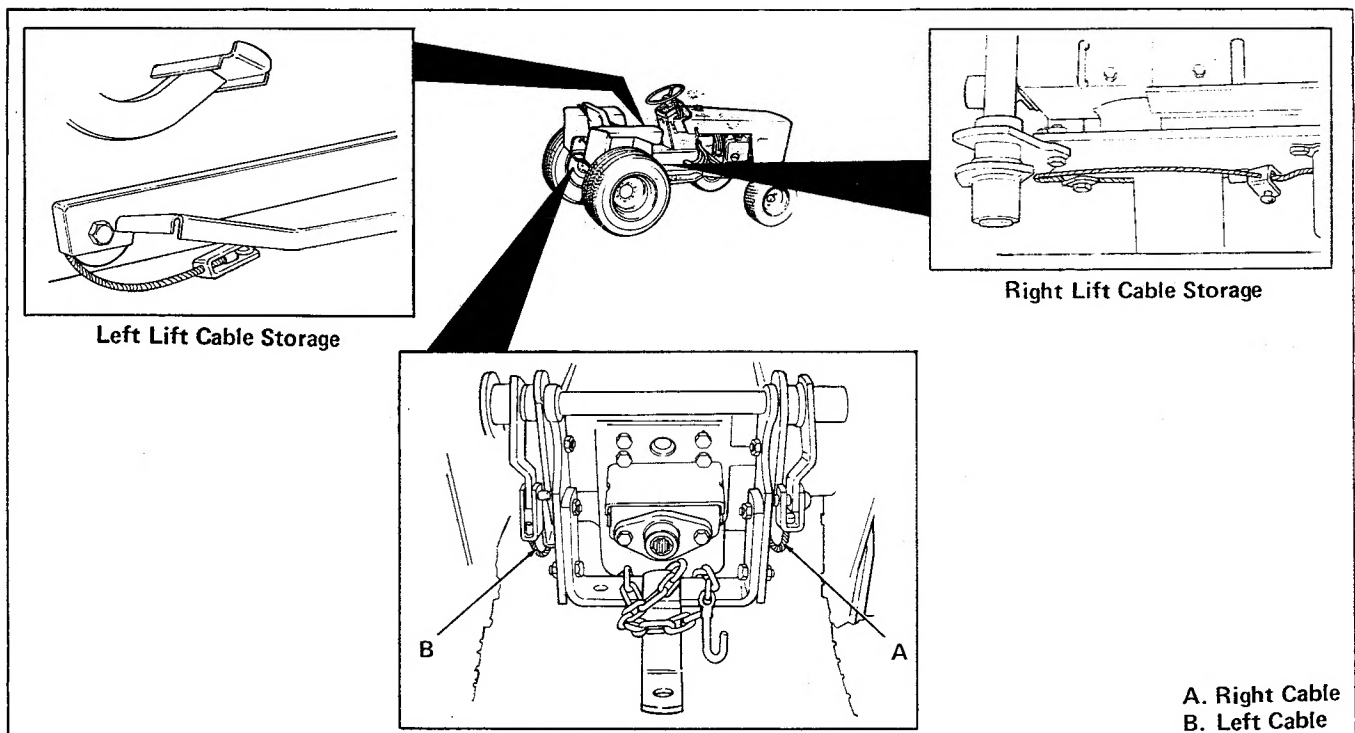


Figure 11. Cable Removal and Storage

## REMOVING THE SICKLE KNIFE

To remove the sickle knife for sharpening or repair, do the following:

1. Remove nut, lockwasher and capscrew (item A, figure 12) and lift housing (item B) out of the way.
2. Remove five capscrews (item C) and lift sickle head (item D) out of the way.
3. Slide sickle knife out of the right (outer end) of the sickle bar.
4. When replacing sickle head capscrews (item C) torque to 19-22 foot-pounds (25-30 N-m). Be careful not to overtighten capscrews as threads may be stripped.
5. Place bearing housing (item B) in position between the sickle head.
6. Make sure that washers are in place on each side of the bearing housing (item B), then install the capscrew, lockwasher and nut (item A) and tighten. Recheck register. See Adjustments section in this manual.

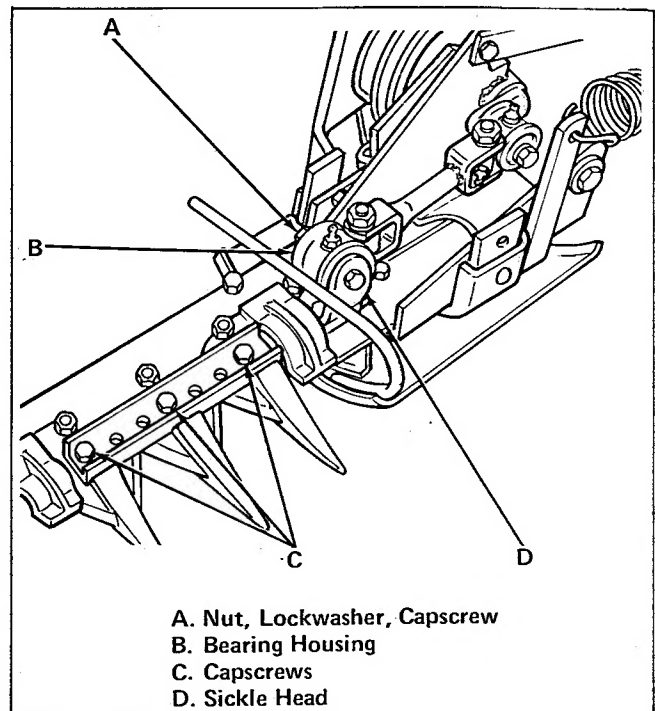


Figure 12. Sickle Knife Removal

# Operation

## CONTENT OF SECTION

A brief description of the sickle bar mower controls, followed by the basic operating procedures, is given in this section to help you get to know your sickle bar mower and how to operate it safely and efficiently.

## CONTROLS

The sickle bar mower is operated using controls on the tractor. Figure 13 shows the locations, names and functions of these controls.

## OPERATING PROCEDURES

The tractor supplies both power and motion for the sickle bar mower. Therefore, tractor operation is vital to proper operation of the sickle bar. Details for sickle bar mower operation are given in the paragraphs that follow. Read all these paragraphs. Then read the general operating procedure for tractor operation with attachments, given in the tractor manual before mowing.

### WARNING

Before attempting to inspect, adjust or service the sickle bar mower, make sure the tractor engine is stopped, ignition key removed, and the parking brake is set. Be sure all moving parts have stopped.

## CHECKS BEFORE STARTING

The checks listed below should be performed before each use of the sickle bar mower.

1. Read this manual. Read the tractor operator's manual. Be sure you know safety precautions and the locations and uses of operating controls.
2. Check the sickle bar mower to be sure that it is properly installed on the tractor. Be sure all nuts, bolts and spring clips are secure.
3. Lubricate the mower as required. See Normal Care section of this manual.
4. Clearly mark or remove from the area to be mowed, any objects which could be caught in or run into by the sickle bar.
5. Determine the best mowing pattern for the job at hand.
6. Adjust skid shoes on sickle bar to obtain desired cutting height. See Adjustment section of this manual.

## SICKLE BAR OPERATION

Details for sickle bar operation are given in paragraphs that follow. Study all of these paragraphs.

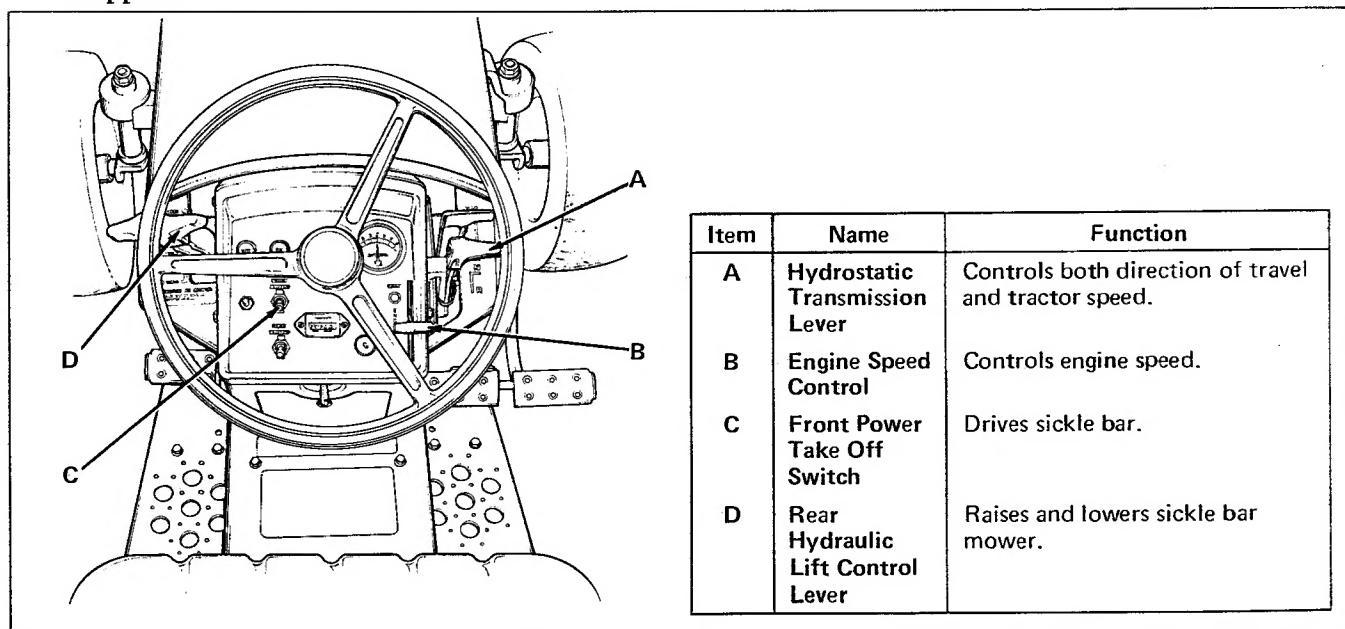


Figure 13. Location and Function of Controls



## LOWER THE SICKLE BAR

To lower the sickle bar for mowing, follow these steps:

1. The sickle bar (item B, figure 14) is stored in the transport position with divider board (item A) positioned forward. To lower sickle bar, shut engine off, remove ignition key and set the parking brake.

### WARNING

Use care when handling the sickle bar to prevent injury from the sharp knives.

2. Unhook transport chain (item C) from the sickle bar and carefully lower it. The sickle bar will support itself at about a 45 degree angle.
3. Remove spring clip and pin (item D) and remove transport chain from mower. Store chain away from mower or wrap and tie chain around tractor drawbar. (See Figure 11).
4. Push hydraulic lever forward to FLOAT position to lower sickle bar to the ground.

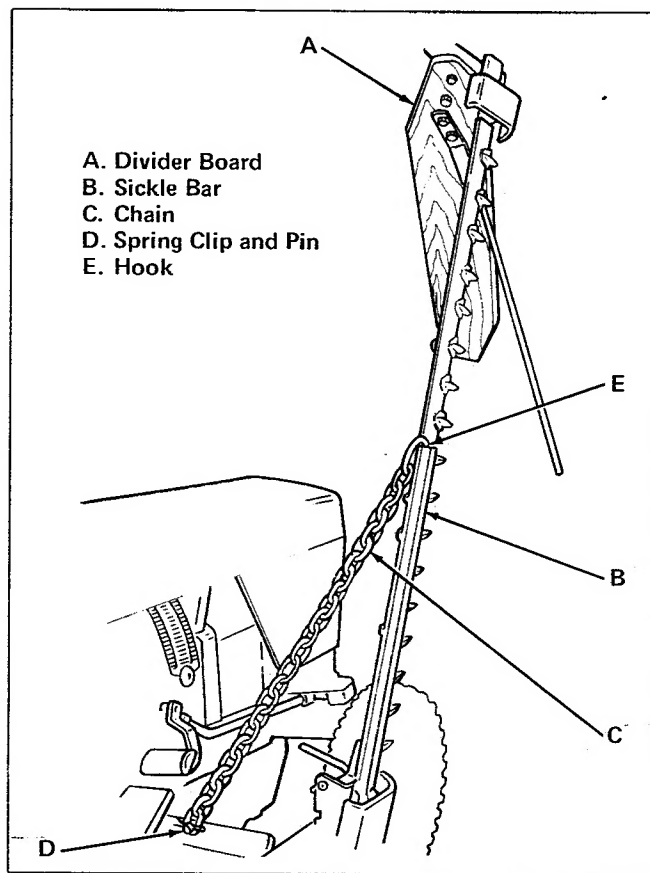


Figure 14. Sickle Bar and Divider Board in Transport Position

## POSITION DIVIDER BOARD

To position divider board from transport to operating position remove spring clip and pin (item B, figure 16). Store spring clip and pin with transport chain. Lift up divider board and place into position (item A, figure 15).

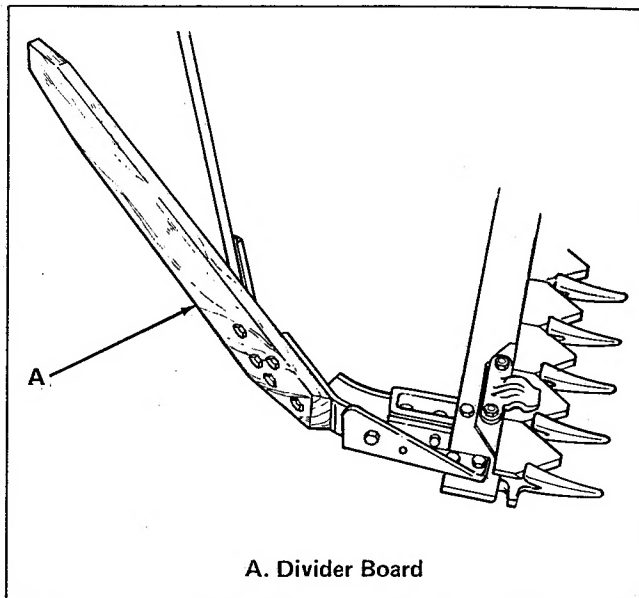


Figure 15. Divider Board in Operating Position

## TRANSPORTING THE SICKLE BAR

The sickle bar may be transported short distances such as across a field, or to clear objects, by lifting the sickle bar with hydraulic lift lever. It is not necessary to disengage mower drive when sickle bar is lifted with the hydraulic lift.

### WARNING

Reduce speed over any areas which are rough, sloping or where there are obstacles on which the sickle bar might catch.

For long distance transport, the sickle bar is stored in the vertical position. Follow these steps:

1. With the sickle bar resting on the ground, lift up divider board and place it forward as shown (item A, figure 16).
2. Remove spring clip, pin and transport chain from storage. Insert pin and spring clip at (item B). Attach chain with pin and spring clip in hole provided for lift chain.
3. Raise sickle bar with hydraulic lift lever to highest position. Shut off engine. Set parking brake, and remove key.

## WARNING

Be especially careful when working around the cutter bar. The cutting edges are very sharp and can cause injury. When lifting cutter bar to transport position keep hands clear of all cutting edges.

4. Carefully raise sickle bar toward tractor to near vertical position and hook chain to end of square tube (item E, figure 14).

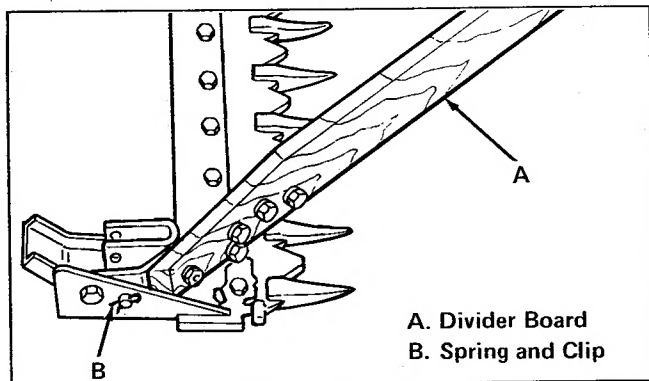


Figure 16. Raising Sickle Bar to Transport Position  
ENGAGING THE MOWER DRIVE

The mower drive should be engaged only when the sickle bar is lowered to an angle of 45 degrees or closer to the ground. After the engine has been started, the mower may be engaged by pushing front PTO clutch switch forward to the ON position.

## WARNING

Be particularly careful and operate at low tractor speed on slopes or in any area where the cutter bar may strike solid objects which might cause the tractor to be jarred. Tractor speed can easily be varied for making turns, traveling around ends and varying mowing conditions by using the hydrostatic speed control lever.

### CUTTER BAR BREAK BACK

The cutter bar is mounted to the mower frame so that it can pivot or "break back" alongside the tractor wheel if a solid object is struck. This feature helps protect the mower as well as the operator and tractor. If the mower breaks back, immediately stop the tractor forward motion and shut off the drive to mower by moving front PTO clutch switch to off. Back the tractor slowly; the cutter bar should snap back into operating position. If it does not relatch or if it is damaged, stop

the engine, set the parking brake and examine the mechanism.

## CAUTION

Never attempt to inspect mower while tractor engine is running!

Adjustment of the break-back mechanism is explained in the Adjustment section in this manual.

### ENGINE SPEED SETTING

When mowing, the engine should normally be operated at 1/2 to full throttle. If the material to be mowed is light, 1/2 engine speed may be enough. Full throttle may be required for heavier material. See operating chart in the tractor operator's manual.

### TRANSMISSION GEAR SELECTION AND TRACTOR SPEED

For average mowing conditions place the three speed transmission in second gear and use the hydrostatic transmission control lever to regulate tractor speed. In smooth fields under light mowing conditions, third gear may be desirable. Under heavy mowing conditions or on rough terrain, first or second gear should be used. See operation chart of the tractor operator's manual for suggested control and speed settings.

### SLOPES

Use rear wheel weights when needed for traction or counterweighting, and use them to operate on slopes greater than 20 percent (11.3 degrees). Never operate on slopes greater than 35 percent (19.3 degrees). Rear wheel weights are recommended for your tractor when using the sickle bar for side hill mowing.

### MOWING PATTERNS

The size and type of area to be mowed determines the best mowing pattern. Obstructions such as trees, fences and buildings must be considered. Generally, when using a sickle bar mower it is desirable to mow one swath in a counterclockwise direction (item A, figure 17) on the first pass next to fences, etc. After this first pass, the remainder of the mowing should be done in a clockwise direction (item B) so that the tractor wheels do not run over the uncut area. In a nearly square field, it usually is the most efficient to mow on all four sides. In a long and narrow field, it may be easier

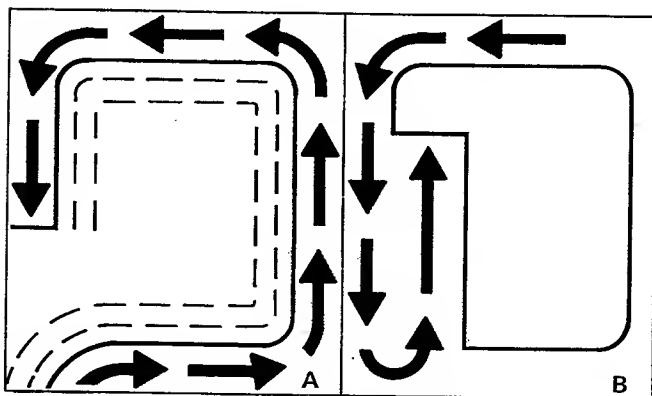


Figure 17. Mowing Patterns

and quicker to mow along the two long sides and drive along the short ends with the sickle bar slightly raised.

Turning corners using a sickle bar mower can be done either of two ways. A sharp right turn may be made at each corner so that the sickle bar swings back and immediately begins cutting the next side of the field (item A, figure 18). Making corners in this manner requires some practice and the tractor steering brakes must be used individually. See the tractor owner's manual. When approaching a corner, use the hydrostatic speed control lever to slow the tractor ground speed. Turn the tractor steering wheel quickly to the right and press the right brake pedal to bring the tractor around the corner sharply. After completing the turn, return the hydrostatic speed control lever to the original position. When this method is used the sickle bar remains in contact with the ground at all times.

Another way to turn the mower is to raise the sickle bar, using the tractor hydraulic system at the

end of each mowing strip and make a sharp left turn (item B). As soon as the sickle bar completes cutting a strip, raise it slightly to bring it above the cut material so it does not plug the guards, and make a tight left turn of 270 degrees and bring the tractor alongside the next side of the unmowed area. Using the left wheel brake will aid in making a sharper turn. Making corners in this manner will normally be neater, and is a little easier to do than making sharp right-hand turns.

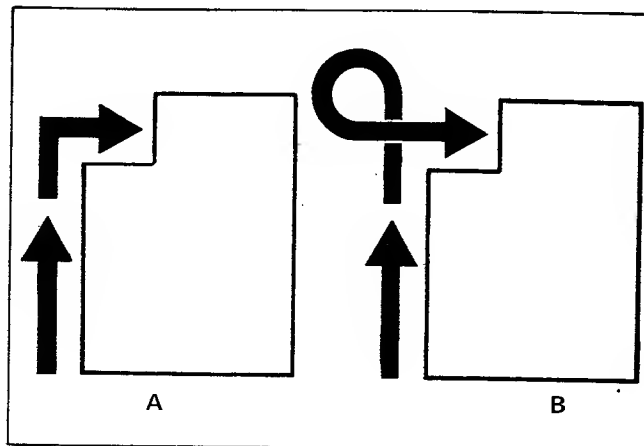


Figure 18. Turning Corners

## Normal Care

Care Required	See Figure	Before First Use	Schedule Every 1 Hour	Every 5 Hours
Lubricate Sickle Knife	20	•	•	
Lubricate Wear Plates	20	•	•	
Lubricate Grease Fittings	21	•		•
Lubricate Break Away Latch	21	•		•

Figure 19. Summary of Scheduled Care

### CONTENT OF SECTION

Your sickle bar mower was designed and built to provide years of service with only minor care. Certain tasks, however, must be performed to keep the sickle bar mower in good operating condition and to avoid costly repairs. This section describes and provides procedures for necessary care of your sickle bar mower.

### SCHEDULED CARE

A schedule for routine care is provided in (figure 19). Your dealer has preformed the tasks required

before the first use of the sickle bar mower. We suggest that you at least check these items to insure that the sickle bar mower is ready for use. Performing the checks will also help you to become familiar with care of this sickle bar mower.

All other scheduled care is performed after operating the sickle bar mower for a specific amount of time. See figures 20 and 21. Remember to perform the "every 1-hour check" when you perform the "every 5-hour check."

Because the schedule is based on operating time, it will be necessary to estimate and keep a record of

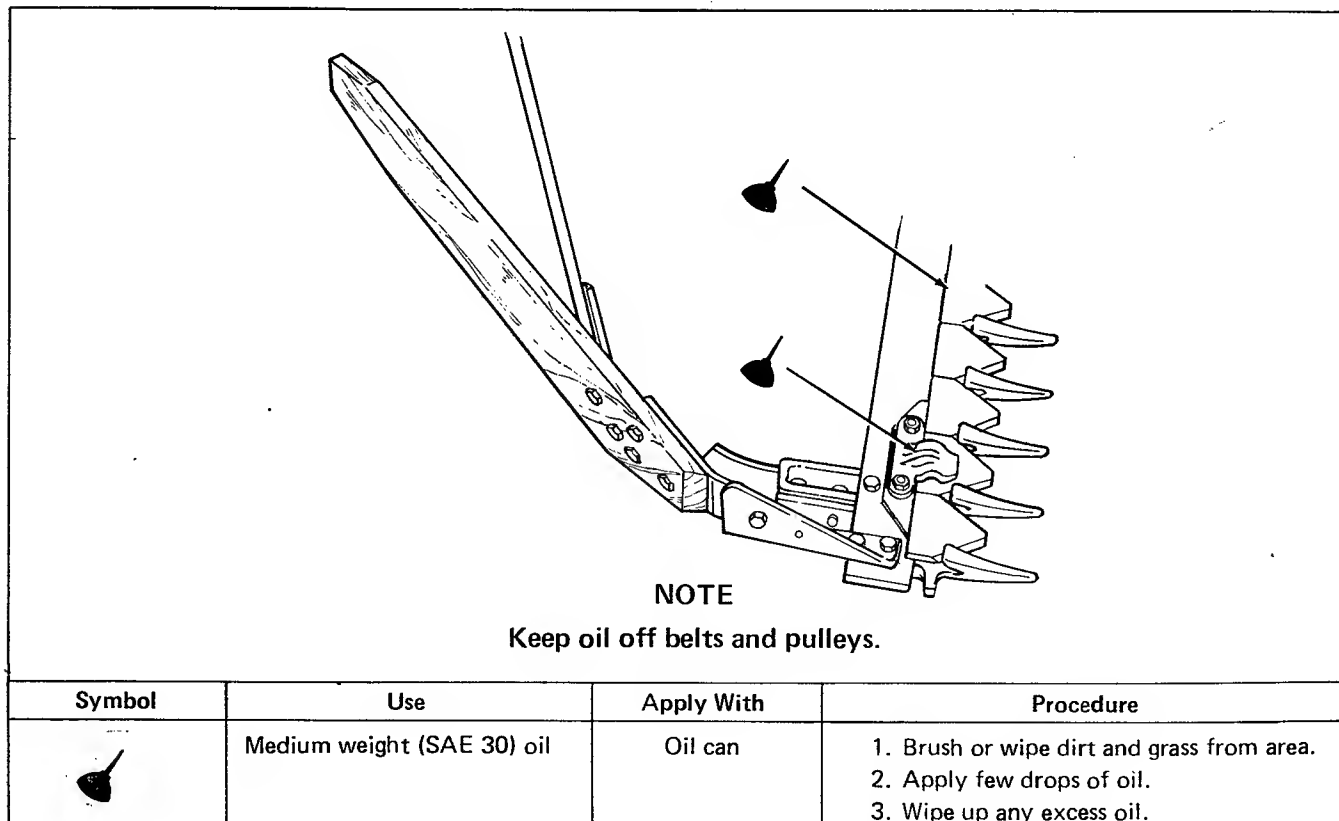


Figure 20. Lubricate Sickle Bar (1-Hour Care) Knife and Wear Plates

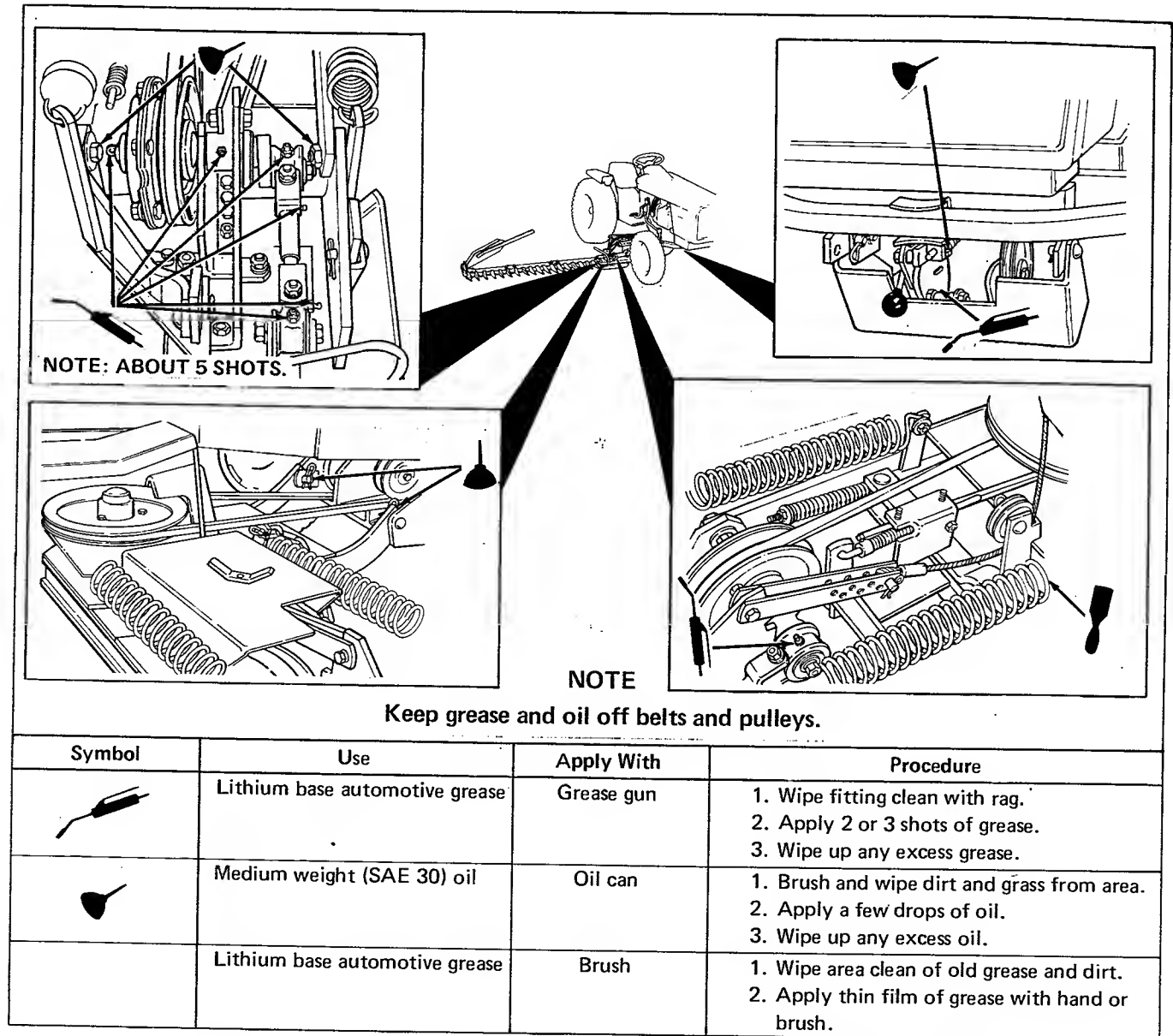


Figure 21. Lubricate Grease Fittings and (5-Hour Care) Breakaway Latch

all operating time. A Maintenance Record (Figure 23) is provided to help you keep a record of all operating time and maintenance repair actions.

#### AFTER EACH USE

Clean off entire sickle bar assembly including guards and knives. Inspect mower and tractor thoroughly, looking for belt wear, missing bolts, spring clips, pins and damaged parts.

#### NORMAL STORAGE

To protect your sickle bar mower, store it in a dry enclosed area.

If you don't intend to use your sickle bar mower for 30-days or more, follow the off-season storage instructions given below.

#### OFF-SEASON STORAGE

1. Remove the sickle bar mower from the tractor.
2. Use water under pressure and a brush to thoroughly clean the sickle bar mower of any build-up of dirt or other material.
3. Cover any area where paint has been worn or chipped away with paint or a light coat of oil.
4. Lubricate the sickle bar mower. See figure 21.
5. Store mower in a dry place.

# Troubleshooting

## CONTENTS OF SECTION

This section of the manual guides you in troubleshooting some of the more common and easily corrected sickle bar mower problems. For problems not covered in this manual, it is recommended that you contact your dealer.

### WARNING

For your safety, do not try to adjust, service or repair the sickle bar mower before disengaging PTO clutch, stopping engine, removing key, setting parking brake and being sure the sickle knife has stopped moving.

## TROUBLESHOOTING PROCEDURES

Troubleshooting procedures are provided in figure 22. To use these procedures, first locate the problem description that best describes the trouble that you have encountered. Check the possible causes one at a time in the order that they are listed. Correct any problems that are found and try to operate the sickle bar mower again to see if you have eliminated the trouble.

Problem	Cause/Remedy
1. Mower cuts unevenly.	<ul style="list-style-type: none"> <li>A. Cutter bar not lowered completely. Place tractor hydraulic lift lever in FLOAT position.</li> <li>B. Skid shoes not adjusted for same height. Adjust skid shoes. See Adjustment section.</li> </ul>
2. Rough looking cut — or grass being pulled out by roots.	<ul style="list-style-type: none"> <li>A. Engine speed too slow. Increase engine speed.</li> <li>B. Tractor speed too fast. Reduce tractor speed.</li> <li>C. Knife edges dull. Sharpen or replace sickle knives.</li> </ul>
3. Cutter bar does not raise high enough (45°) using tractor hydraulic lift.	<ul style="list-style-type: none"> <li>A. Right lift cable not in correct lift bracket hole. See Adjustment section.</li> </ul>
4. Cutter bar breaks back too easily.	<ul style="list-style-type: none"> <li>A. Tractor speed too fast. Reduce tractor speed.</li> <li>B. Break-back latch not correctly adjusted. Adjust break-back latch. See Adjustment section.</li> </ul>
5. Cutter bar does not break-back when solid object is hit.	<ul style="list-style-type: none"> <li>A. Break-back latch not lubricated. Lubricate latch.</li> <li>B. Break-back latch not properly adjusted. Adjust break-back latch. See Adjustment section.</li> </ul>
6. Sickle knife noisy or vibrates excessively.	<ul style="list-style-type: none"> <li>A. Sickle knife wear plates badly worn. Replace wear plates.</li> <li>B. Sickle knife clips badly worn. Replace clips.</li> </ul>
7. Tractor handles poorly.	<ul style="list-style-type: none"> <li>A. Tires not properly inflated. Inflate tires according to tractor owner's manual.</li> <li>B. Traveling too fast on rough or sloping ground. Reduce speed.</li> <li>C. Not using recommended weights. Use rear wheel weights.</li> </ul>

Figure 22. Troubleshooting Procedures

[illegible]

16

# Adjustments

## CONTENT OF SECTION

This section contains adjustment procedures for the sickle bar mower. The adjustments are normally performed to correct specific problems.

### WARNING

Stop engine, remove key, set parking brake and wait for all mower motion to stop before making any checks or adjustments.

## CUTTING HEIGHT ADJUSTMENT

Two skid shoes, one outer and one inner, are used to adjust the cutting height of the sickle bar. The three cutting heights available are approximately:

LOW:	2-3/4 Inches	(69.9 mm)
MEDIUM:	3-1/2 Inches	(88.9 mm)
HIGH:	4-1/4 Inches	(107.9 mm)

The outer skid shoe (item A, figure 24) is at the lowest cutting position when the open end (item

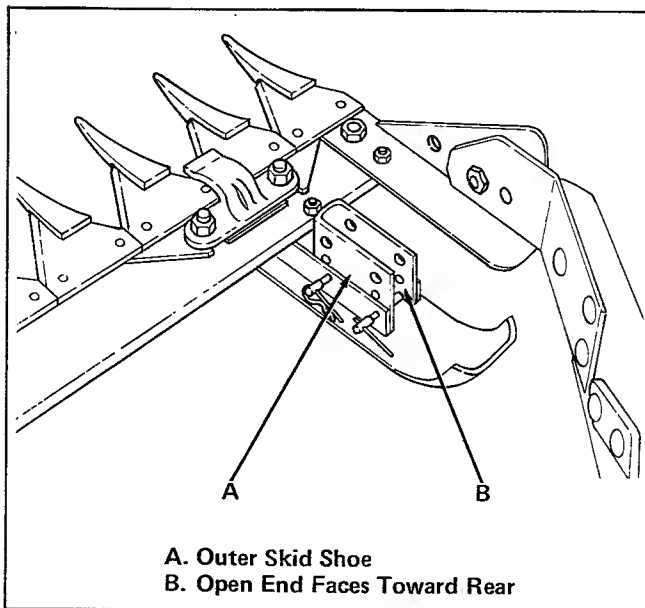


Figure 24. Outer Skid Shoe Adjustment

B) is facing to the rear. When using medium or high cutting heights, the outer skid shoe is turned around so the open end of skid shoe faces toward the sickle bar.

The inner skid shoe (item A, figure 25) should always be adjusted to provide the same cutting height as the outer skid shoe. For the same cutting height, install pins through similar set of holes in both skid shoes.

For easy skid shoe adjustment, raise the sickle bar, place a block under the bar and lower bar to block. This will keep the skid shoes off the ground for

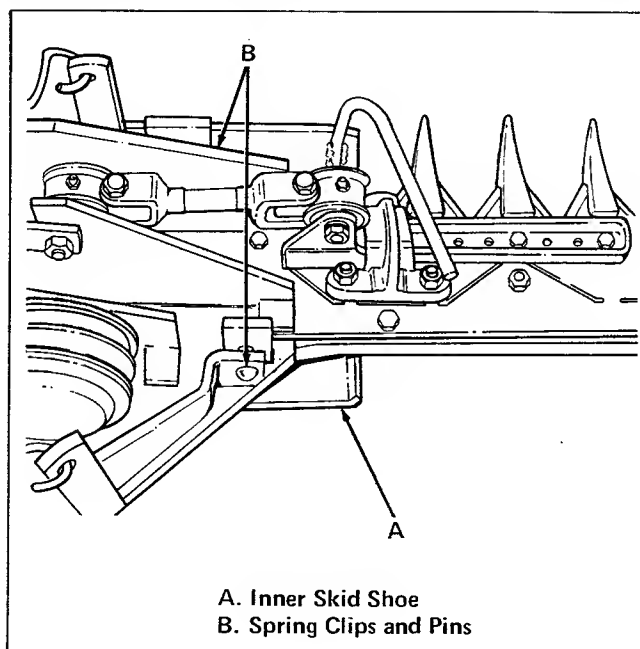


Figure 25. Inner Skid Shoe Adjustment

adjustment and prevent possible injury. To adjust, remove the two spring clips and pins (item B) and place them in desired holes. Repeat same procedure for outer skid shoes. When replacing the spring clips, always push them all the way through the holes in the pins to prevent them from falling out.



## MOWER DRIVE BELT TENSION ADJUSTMENT

Mower drive belt has proper tension when the distance between the rod guide (item A, figure 26) and set collar (item B) measures  $1/2$  to  $5/8$  inch (12 to 15 mm) when belt tightening handle (item C) is down in the tight position with belt attached. To adjust, proceed as follows:

1. Lift belt tightening handle (item C) to release belt tension.
2. Loosen setscrew (item D) in set collar (item B), pull rod (item E) forward to increase belt tension, or push back to decrease belt tension. Tighten screw in collar.
3. Move belt tightening handle down and repeat check for proper distance.

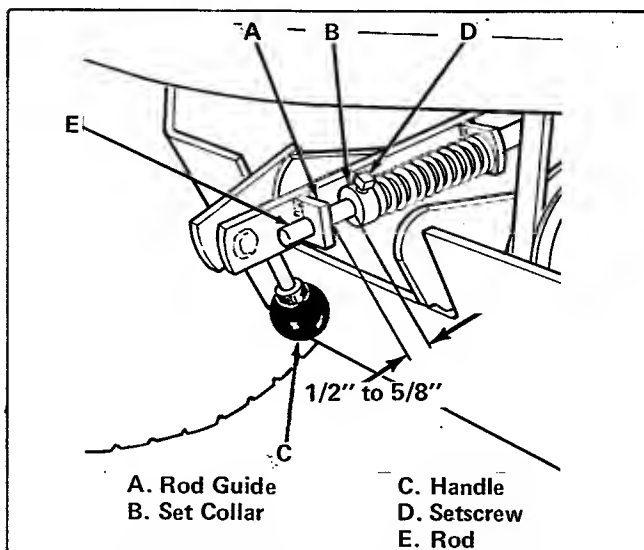


Figure 26. Belt Tension Adjustment

## MOWER DRIVE BELT CLEARANCE ADJUSTMENT

Check drive belt (item A, figure 27) to be sure there is at least  $1/4$  inch (6 mm) clearance between the belt and battery in front (item B) and between the belt and frame in rear (item C). If closer than  $1/4$  inch (6 mm) adjust as follows:

1. Pull belt tightening handle forward to release belt tension.
2. Loosen nut (item A, figure 28) so left hand idler pulley (item B) can be moved forward or rearward in slot (item C).
3. Move left hand idler pulley forward or rearward as required to center drive belt half-way between battery and tractor frame.

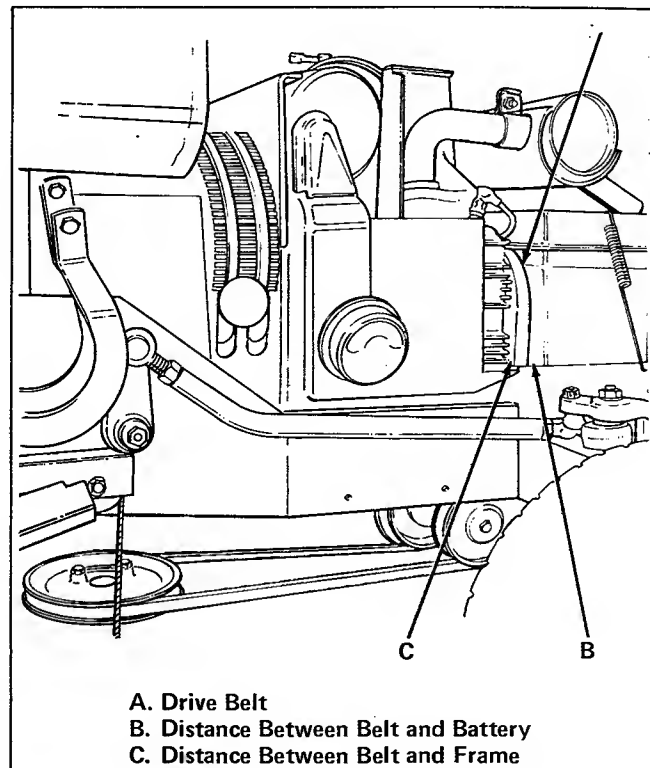


Figure 27. Belt Clearance Adjustment

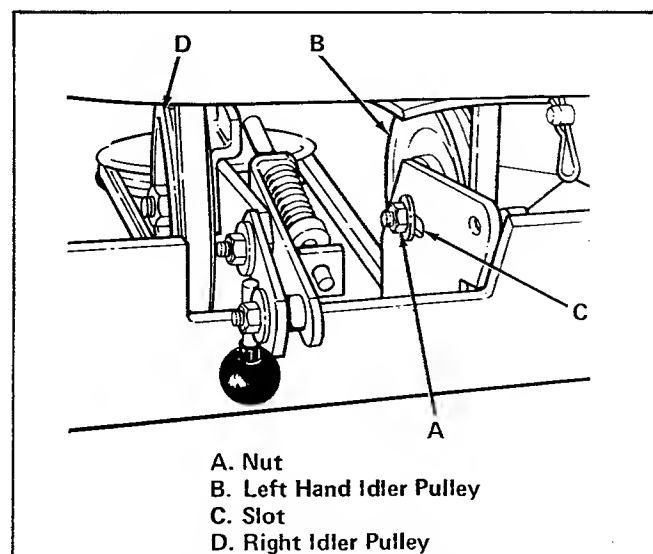


Figure 28. Idler Pulley Adjustment

4. Tighten nut securely to prevent left-hand idler pulley (item B) from moving out of adjustment. Nut should be torqued to 50 foot-pounds (67 N·m).
5. Repeat Mower Drive Belt Tension Adjustment.

## SICKLE KNIFE DRIVE BELT ADJUSTMENT

Tension of sickle knife drive belt (item A, figure 29) is correct when sickle knife drive belt spring (item B) measures between 3 to 3-1/4 inches (76.2 to 82.6 mm) with belt attached. Move set collar (item C) on rod spring (item D) until spring length comes into this range.

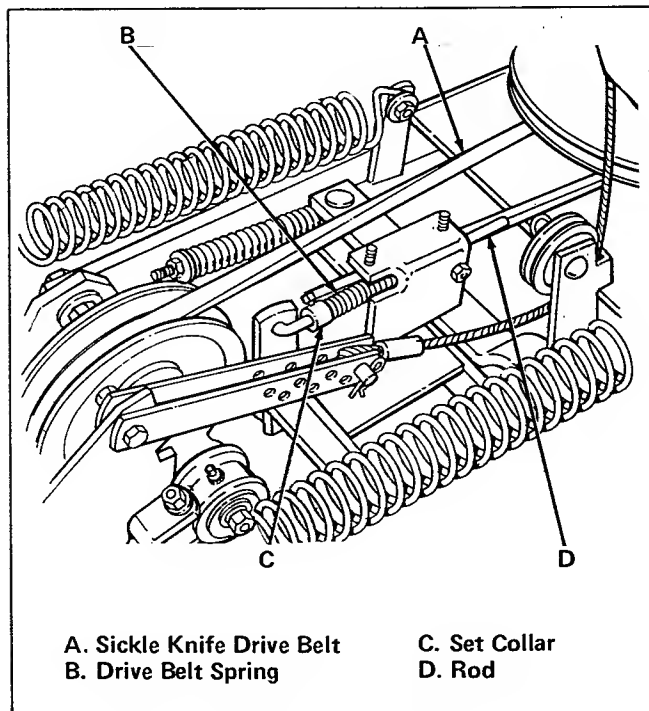


Figure 29. Knife Drive Belt Adjustment

## CUTTER BAR BREAK-AWAY ADJUSTMENT

The sickle bar is hinged on mower frame so that it can swing to the rear (trip) in event a solid object is struck while mowing.

### ⚠ WARNING

This break away must be kept in good operating order to provide operator safety and to prevent mower damage.

### NOTE

For proper operation, the sliding surface of the break away assembly must be coated with grease at all times. See Normal Care section in this manual.

The length of the break-away spring (item A, figure 30) controls the force required to operate break-away mechanism. Normal setting for this spring is from 5 to 5-1/4 inches (127.0 to 133.4 mm). To adjust break-away force, loosen break-away

adjusting nut (item B) to change spring length. A short spring length increases the force required to trip the mechanism, a longer spring length lowers the force. Tighten adjusting nut.

### ⚠ WARNING

Do not overtighten spring nut. There should only be enough pressure on spring so bar mechanism will not trip during normal cutting.

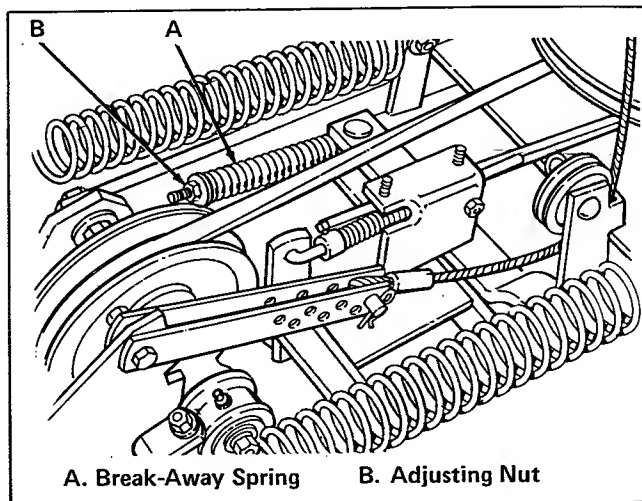


Figure 30. Break-Away Adjustment

## SICKLE BAR REGISTER ADJUSTMENT

### ⚠ WARNING

Shut off engine, set parking brake, remove key, be sure all moving parts have stopped. Be very careful when working around cutter bar assembly. Knives and guards are very sharp and can cause injury.

For efficient operation the sickle knives (item A, figure 31) must be so centered with the guards (item B) that the flat tip of each knife is completely covered by the top lip of guard when sickle stops at each end of a stroke.

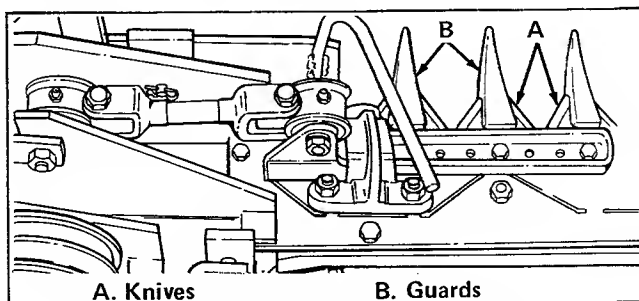


Figure 31. Sickle Bar Knives and Guards

To check sickle register, rotate sickle bar drive mechanism by hand, turning drive pulley until the sickle knife is as far right as it will go. The knife-guard relationship should now be centered (item A).

If any part of flat tip of knife (item A, figure 32) appears outside of guard (item B) the sickle should be retimed. Proceed as follows:

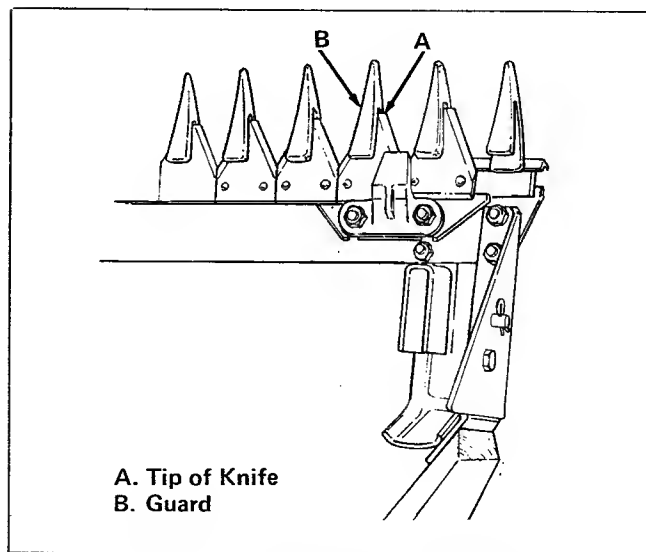


Figure 32. Sickle Out of Register

1. Remove pitman bearing capscrew (item A, figure 33) and lift pitman bearing housing (item B) up and out of sickle head assembly (item C).

#### NOTE

Be careful not to allow washers on either side of bearing housing to fall out of place.

2. Rotate the bearing housing to increase or decrease the pitman length to properly center sickle knives in guards (item D).

#### NOTE

Be sure bearing is turned so grease fitting faces upward.

3. Bolt pitman bearing in place into sickle head assembly and tighten capscrew.

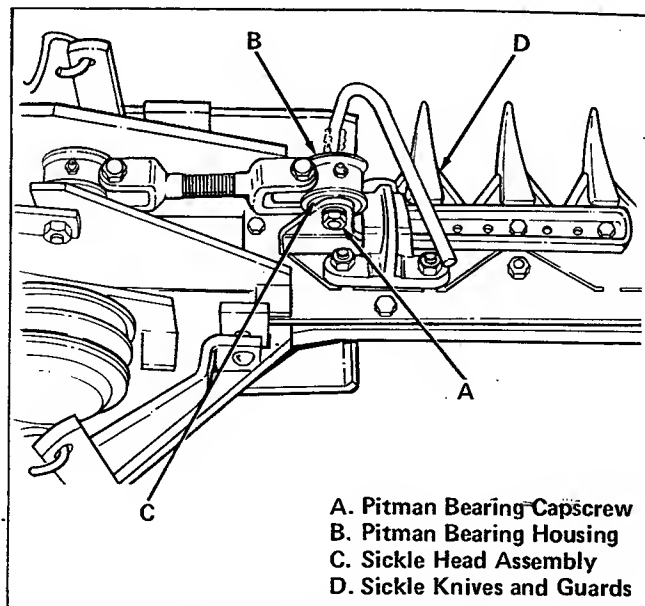


Figure 33. Register Adjustment

#### HOLD DOWN CLIP HEIGHT ADJUSTMENT

The front edge of the five hold down clips (item A, figure 34) should bear very lightly on the top side of the sickle knives. Adjust clips by tapping the front edge down with a hammer. These clips should not be tapped down so tight as to interfere with smooth sickle operation.

#### SICKLE WEAR PLATE ADJUSTMENT

Five sickle wear plates (item B, figure 34) are mounted with slotted holes so they can be adjusted forward to reduce front to rear clearance of sickle knife and bar. To adjust, partly loosen bolts through the wear plates and push plates forward so that forward and backward limit of the sickle knife is not more than 1/16 inch (1.6 mm). Tighten bolts and check that sickle knife is free to move from end to end.

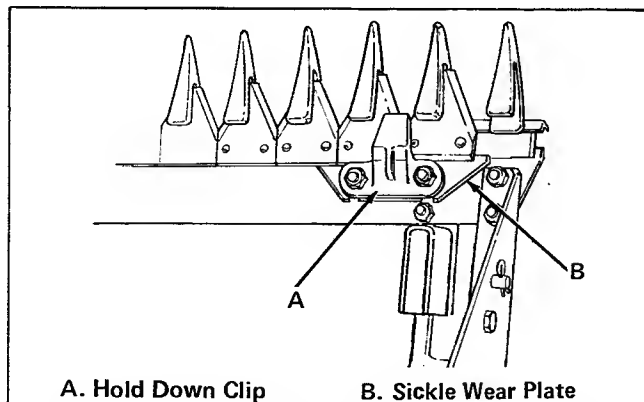


Figure 34. Hold Down Clips and Wear Plates

# Assembly

## CONTENT OF SECTION

Before your sickle mower can be installed on the tractor it must be assembled. This section contains step-by-step instructions on how to assemble your sickle bar mower.

## ASSEMBLY OF SICKLE BAR MOWER

1. Carefully remove all items from shipping carton.
2. Sort out all items from hardware package and arrange items by type and size.
3. Remove cover (item A, figure 35) by removing wing nut (item B). Lift off cover.

### NOTE

Belt (item C) must be installed before connecting hitch to sickle bar assembly.

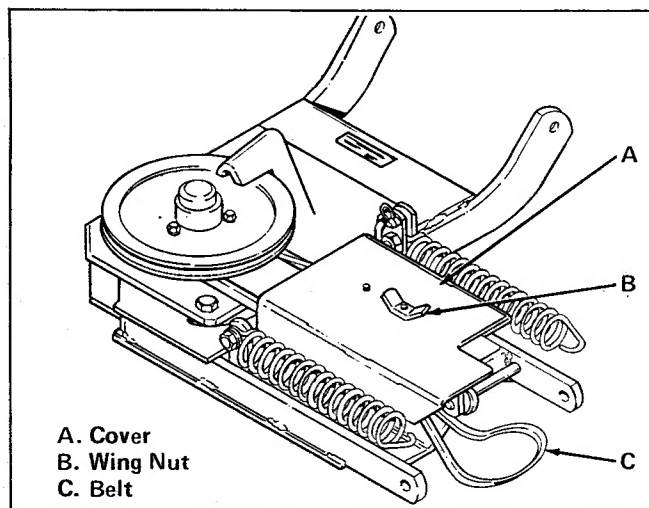


Figure 35. Remove Cover

4. Remove idler pulley rod guide (item A, figure 36) from bracket. Remove bracket (item B) from sickle assembly. Remove hardware (item C) and align hitch with sickle bar assembly. Install belt (item D).
5. Align hitch with holes of sickle bar assembly.

### NOTE

Large flat washer (item A, figure 37) must rest against the spacer. Lubricate pivot points with a few drops of SAE 30 oil. Reassemble idler pulley rod guide assembly (item B) to bracket.

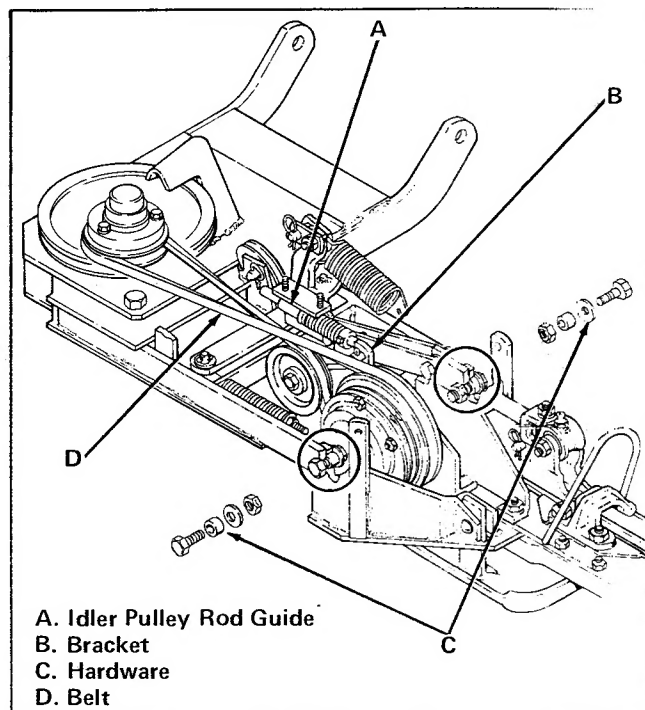


Figure 36. Hitch and Sickle Assembly

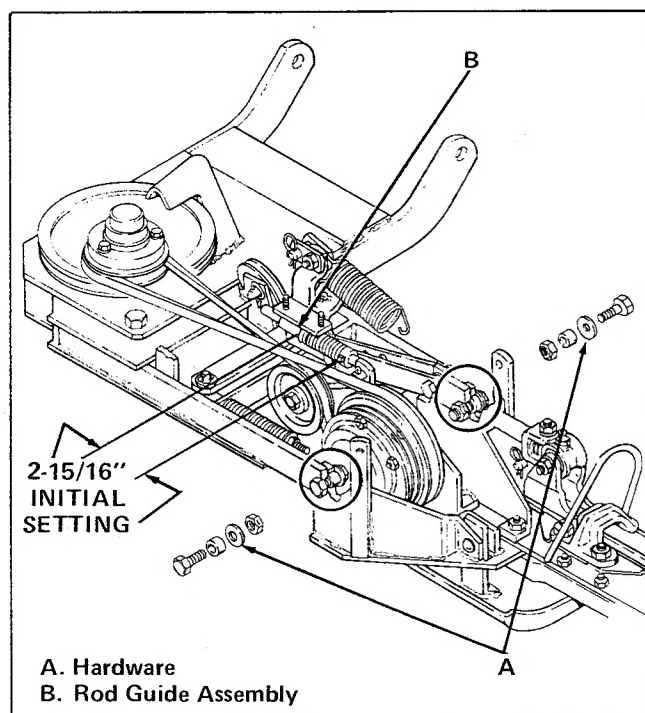


Figure 37. Sickle Bar Assembly

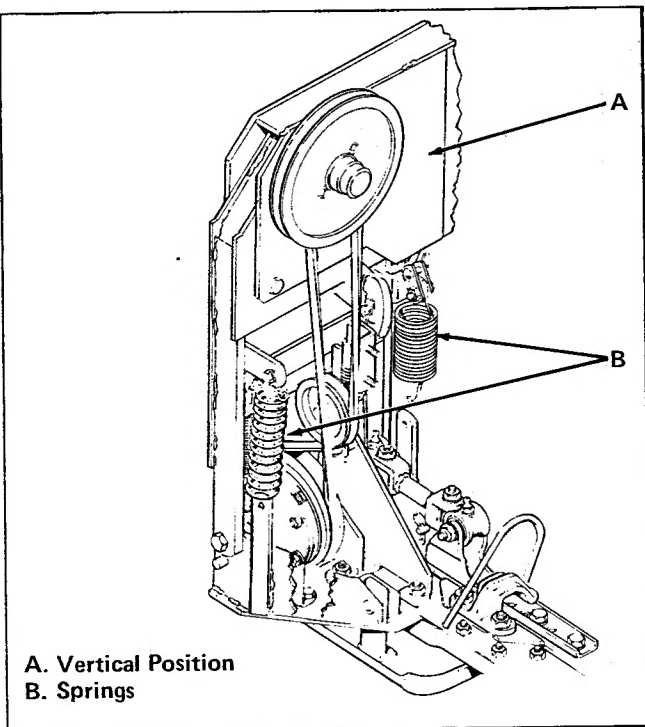


Figure 38. Attach Springs

6. Raise hitch to vertical position (item A, figure 38) towards the sickle bar. Attach loose ends of springs to brackets (item B) using a vice grip pliers.

### CAUTION

Spring can snap back and cause injury.

After springs are attached, lower hitch to the ground.

7. Install divider board (item A, figure 39) using shoulder bolt and locknut (item B). Install divider rod with two bolts, washers and nuts. The sickle bar mower is now ready to be installed on tractor.

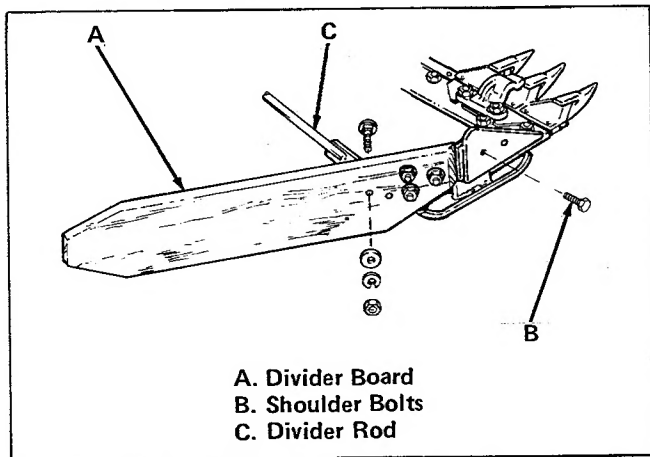


Figure 39. Divider Board Assembly

## PREPARE TRACTOR FOR SICKLE BAR MOWER ASSEMBLY

The 57 inch (1.45 m) sickle bar mower requires a longer and heavier right-hand center lift cable, than is furnished with the standard lift. This heavier cable is furnished with your sickle mower. Once this heavier sickle bar mower cable is installed, it is not necessary to remove it.

### LIFT CABLE ASSEMBLY

1. Remove capscrew (item A, figure 40) from cover channel (item B). Loosen nut (item C). Pull cover off tractor.

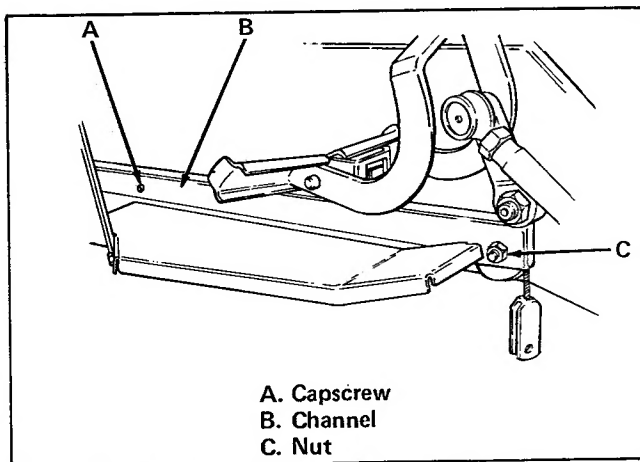


Figure 40. Lift Cable Replacement

2. Loosen nut (item A, figure 41), slip clamp to side allowing lift cable to be removed. Install new lift cable with largest clamp (item B) to rear of tractor.

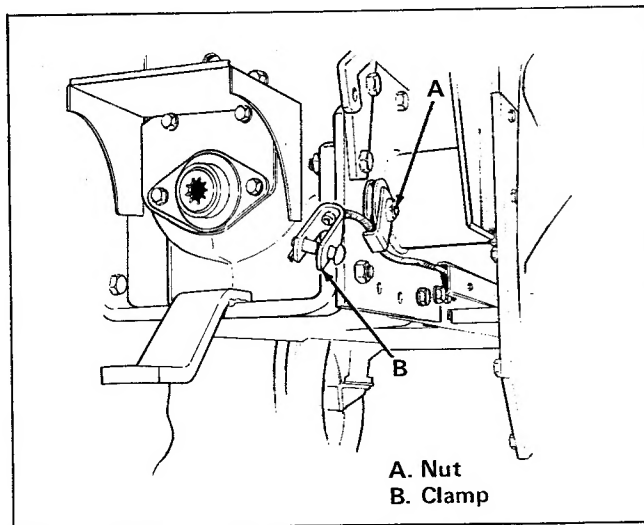


Figure 41. Install New Cable

3. Position cable on front pulley, located near right front foot rest. The spacer must be between guard and the tractor frame.

#### NOTE

Be sure cable is installed above the spacer.

4. Secure cover channel. Check lift for proper operation.

### MID-MOUNTED MOWER ADAPTER

The rotary mower may be mounted on the tractor equipped with a long lift cable, by use of an adapter. The adapter is furnished with the sickle mower and comes assembled. To mount on rotary mower follow these steps:

1. Remove capscrew (item A, figure 42) and install adapter (item B) on mower mounting bracket (item C). Place one washer (item D) on each side of mounting bracket. Secure adapter to bracket with capscrew.
2. Remove capscrew (item E). Place bracket over right-hand lift eyebolt (item F). Install washers (item G) and capscrew.
3. To install lift cable (item H) remove spring

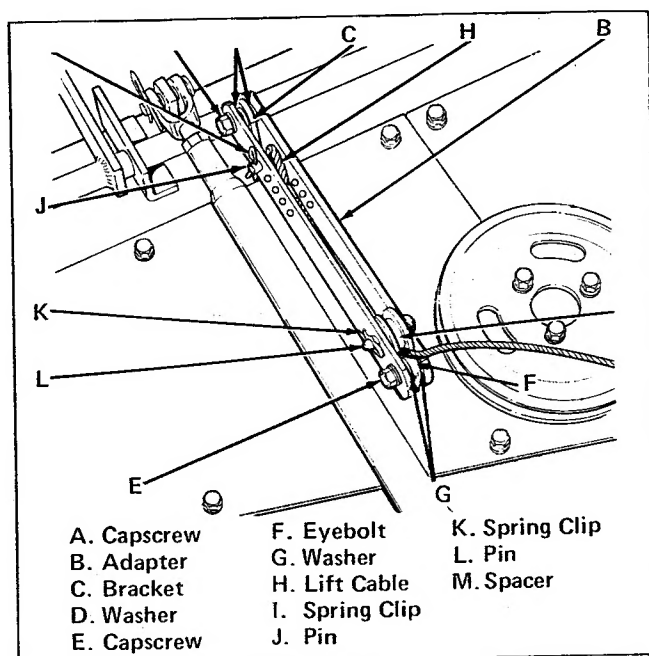


Figure 42. Mower Adapter

- clip (item I). Pull out pin (item J) and insert end of cable loop. Push pin through bracket and cable loop. Secure with spring clip.
4. Remove spring clip (item K), pin (item L) and spacer (item M). Place cable between bracket. Install cable under spacer. Secure with pin and spring clip. Cable length can be adjusted by moving pin (item J) to desired holes.

<b>DIMENSIONS</b>	<b>Effective Cutting Width</b>	57 Inches (1.45 m)
	<b>Height Adjustment</b>	2-1/4 to 4-1/4 Inches (63.5 to 108.0 mm)
	<b>Transport Clearance</b>	7 Inches (177.8 mm)
	<b>Width</b>	94 Inches (2.4 m)
	<b>Length</b>	46 Inches (1.2 m)
	<b>Height</b>	18 Inches (457.2 mm)
	<b>Weight</b>	199 Pounds (90.3 kg)
<b>CONTROLS</b>	<b>Height Adjustment</b>	Manually Adjusted Skid Shoes.
	<b>Cutter Bar Break-Back</b>	Spring Loaded Trip Release and Reset.
	<b>Tractor Lift</b>	Hydraulic Cylinder Actuated by Tractor Hydraulic System Front Lift Lever.
	<b>Engagement</b>	Tractor Front PTO. Electric Switch Mounted on Instrument Panel.
<b>POWER DRIVES</b>	<b>Tractor PTO</b>	Front "V" Belt Drive from Electromagnetic Clutch.
	<b>Mower Drive</b>	"A" Section "V" Belt with Spring Loaded and Adjustable Idlers.
	<b>Eccentric Drive</b>	"A" Section "V" Belt with Spring Loaded Idler.
<b>CONSTRUCTION</b>	<b>Frame</b>	Electrically Welded Steel Bar and Plate.
	<b>Eccentric Drive</b>	Anti-friction Needle and Ball Bearing. Mounted Shafts.
	<b>Knife Section</b>	Heat Treated Alloy Steel. Replaceable Knives and Guards.
	<b>Hitch</b>	Welded Steel Construction. Attaches to the Tractor Front Axle with Four Pins.

SPECIFICATION SUBJECT TO CHANGE WITHOUT NOTICE.